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भारतीय मानक

सूचना एवं प्रलेखन — अन्तर्राष्ट्रीय मानक श्रृंखला संख्या

(आई एस एस एन)

(दूसरा पुनरीक्षण)

Indian Standard

INFORMATION AND DOCUMENTATION — INTERNATIONAL STANDARD SERIAL NUMBER (ISSN)

(Second Revision)

ICS 01.140.20

BUREAU OF INDIAN STANDARDS
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Documentation and Information Sectional Committee, MSD 5

NATIONAL FOREWORD

This Indian Standard (Second Revision) which is identical with ISO 3297 : 2007 'Information and documentation — International standard serial number (ISSN)' issued by the International Organization for Standardization (ISO) was adopted by the Bureau of Indian Standards on the recommendation of the Documentation and Information Sectional Committee and approval of the Management and Systems Division Council.

The standard was originally published in 1982 and revised in 2003. The second revision of this standard has been undertaken to bring it in line with the latest version of ISO 3297.

In this revision, the entire text has been reorganized and rewritten. This edition clarifies and confirms that different media versions of a continuing resource are assigned different ISSN. In recognition of the increasing need in the digital environment to collocate as well as differentiate media versions this edition of the standard introduces a functionality, the "linking ISSN" (ISSN-L), for the purpose of supporting services that offer search and delivery functionality across all media versions.

The text of ISO Standard has been approved as suitable for publication as an Indian Standard without deviations. Certain conventions are however not identical to those used in Indian Standards. Attention is particularly drawn to the following:

   Wherever the words 'International Standard' appear referring to this standard, they should be read as 'Indian Standard'.

The name and address of the agency which allocates ISSN in India is National Institute of Science Communication and Information Resources (NISCAIR), 14 - Satsang Vihar Marg, New Institutional Area, New Delhi – 110067. ISSN can be obtained by applying through filled datasheet, downloadable from NISCAIR Website www.niscair.res.in along with a specimen copy of the serial in case of print version or a copy of home page in case of online version to Head, National Science Library at the above address. The service is provided free of cost by NISCAIR.

Annexes A, B, C and D of this Indian Standard form an integral part of the standard. Annex E of this Indian Standard is for information only and does not form a part of the standard.

Introduction

The need for a brief, unique and unambiguous identification code for serials and other continuing resources is internationally recognized. The exchange of information among libraries, abstracting services and other content users; suppliers, distributors and other intermediaries; and publishers and other content producers imposes the requirement for a standard code. Communication between the different organizations transcends national boundaries and therefore requires an international code which is numeric, since no single alphabet is used by the majority of producers and users of serials. In response to these requirements, the International Standard Serial Number (ISSN) was established as the identification code for serials.

The International Serials Data System (ISDS) was established as an inter-governmental organization within the framework of the UNESCO/UNISIST program to be the designated authority for controlling the assignment of ISSN. In 1993, the ISDS became the ISSN Network.

The first three editions of this International Standard pertained only to serials. However, in 2002 a new category of resources, "continuing resources", was defined by the library community to encompass new kinds of resources, such as updating databases, as well as traditional serials. Thus the scope of this fourth edition has been broadened to cover serials and other continuing resources.

Indian Standard

INFORMATION AND DOCUMENTATION — INTERNATIONAL STANDARD SERIAL NUMBER (ISSN)

(Second Revision)

1 Scope

This International Standard defines and promotes the use of a standard code (ISSN) for the unique identification of serials and other continuing resources.

Each International Standard Serial Number (ISSN) is a unique identifier for a specific serial or other continuing resource in a defined medium. This International Standard also describes a mechanism, the "linking ISSN (ISSN-L)," that provides for collocation or linking among the different media versions of the same continuing resource.

ISSN are applicable to serials and to other continuing resources, whether past, present or to be published or produced in the foreseeable future, whatever the medium of publication or production.

Individual monographs, sound and video recordings, printed music publications, audiovisual works and musical works have their own numbering systems and are not specifically mentioned in this International Standard. Such items may carry an ISSN in addition to their own standard numbers when they are part of a continuing resource.

More detailed operational guidance is provided in the *ISSN Manual* available from the Registration Authority for this International Standard (see Clause 11).

2 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

2.1
continuing resource
publication, in any medium, that is issued over time with no predetermined conclusion and made available to the public

NOTE 1   Such a publication is usually issued in successive or integrating issues which generally have numerical and/or chronological designations.

NOTE 2   Continuing resources include serials such as newspapers, periodicals, journals, magazines, etc., and ongoing integrating resources such as loose-leaf publications that are continually updated and Web sites that are continually updated.

NOTE 3   The French term is *ressource continue.*

2.2
serial
continuing resource issued in a succession of discrete issues or parts, usually bearing numbering, that has no predetermined conclusion

EXAMPLE   Journals, magazines, electronic journals, ongoing directories, annual reports, newspapers, monographic series, and also those journals, magazines and newsletters of limited duration that otherwise bear all the characteristics of serials (e.g. newsletter of an event).

NOTE   The French term is *publication en série.*

2.3
ongoing integrating resource
continuing resource that is added to or changed by means of updates that do not remain discrete and are integrated into the whole

EXAMPLES   Databases, Web sites and loose-leafs that are updated over time with no predetermined conclusion.

NOTE   The French term is *ressource intégratrice permanente.*

2.4
ISSN
International Standard Serial Number
eight digit number, including a check digit and preceded by the alphabetic prefix ISSN, assigned to a continuing resource by the ISSN Network

NOTE   The French term is *ISSN, Numéro international normalisé des publications en série.*

2.5
ISSN Network
collective entity comprised of the ISSN International Centre and the ISSN national and regional centres, for the purpose of administering the assignment of ISSN

NOTE   The French term is *Réseau de l'ISSN.*

2.6
key title
unique name for a continuing resource, established by the ISSN Network and inseparably linked with its ISSN

NOTE 1   The key title can be the same as the title of the resource; or, in order to achieve uniqueness, it can be constructed by the addition of identifying and/or qualifying elements such as name of issuing body, place of publication, edition statement, etc.

NOTE 2   The French term is *titre clé.*

2.7
ISSN metadata
descriptive data recorded as part of the ISSN assignment process that provides elements by which the resource is identified and distinguished from other resources

NOTE   The French term is *métadonnées de l'ISSN.*

2.8
ISSN Register
official registration database of the ISSN Network containing metadata records for the ISSN assigned to continuing resources

NOTE   The French term is *Registre de l'ISSN.*

2.9
ISSN-L
Linking ISSN
ISSN designated by the ISSN Network to enable collocation or linking among the different media versions of a continuing resource

NOTE   The French term is *ISSN de liaison.*

3 Construction of ISSN

An ISSN shall consist of eight digits, using Arabic numerals 0 to 9, except for the last digit (extreme right, low-order position) which can also use the upper case letter X. The last digit shall be the check digit. The check digit shall be calculated on a modulus 11 basis with weights 8 to 2, using X in lieu of 10 where 10 would occur as a check digit. See Annex A for further details.

Since ISSN are likely to be used in the same context as codes designed for other purposes, such as the International Standard Book Number (ISBN) or local control numbers, the written or printed presentation of ISSN shall clearly distinguish ISSN from other numbering systems. Therefore, an ISSN shall be preceded by the prefix ISSN and a space, and shall appear as two groups of four digits separated by a hyphen.

EXAMPLES

ISSN 0251-1479

ISSN 1050-124X

4 Assignment of ISSN

4.1   An ISSN shall be assigned only by a centre of the ISSN Network.

4.2   Required metadata about the continuing resource to which an ISSN is assigned shall be collected and submitted within the timeframe established by the ISSN International Centre to the *ISSN Register* by the centre of the ISSN Network that registered the continuing resource. See Annex B for further details.

4.3   Each distinct continuing resource in a particular medium as defined in the *ISSN Manual* shall be assigned only one ISSN.

4.4   Each ISSN shall be permanently linked to the key title established by the ISSN Network at the time of registration.

4.5   When a continuing resource is published in different media, with the same title or not, different ISSN and key titles shall be assigned to the different editions.

4.6   In cases where the continuing resource undergoes a major change in title or other major change as defined in the *ISSN Manual*, a new ISSN shall be assigned and a corresponding new key title shall be established.

4.7   Once an ISSN has been assigned to a continuing resource, it shall not be altered, replaced or reused for another publication.

4.8   The assignment of an ISSN to a continuing resource shall not imply any meaning or legal evidence with regard to the ownership of rights to that publication or its contents.

5 Establishment of the key title

The key title is established or authenticated by the ISSN centre responsible for the registration of the continuing resource, in accordance with the rules given in the *ISSN Manual*.

The key title is derived from information appearing at the time of registration on the title page of resources having a title page or title page equivalent, or from the most complete information formally presented on resources lacking a title page. The title of the resource becomes the key title if this title is unique in the *ISSN Register* at the time of registration. If this title is not unique, the key title is the title of the resource, to which a qualifying term is added (such as name of issuing body, place and/or date of publication, edition statement or medium statement), in order to make the resulting key title unique.

All key titles are listed in the *ISSN Register* together with their ISSN. Key titles in non-roman alphabets shall be romanized according to ISO standards or, in the absence of ISO standards, national standards.

6   Linking ISSN (ISSN-L)

To enable the use of ISSN in cases where finding or linking to a continuing resource without regard to medium is desired, the ISSN Network shall designate a linking ISSN.

The linking ISSN shall be designated from among the ISSN assigned to the different media versions of a continuing resource. Further specifications regarding the linking ISSN are given in Annex C.

7   Printing and display of ISSN

7.1   General

The ISSN shall be presented as two groups of four digits separated by a hyphen and shall always be preceded by the prefix ISSN and a space (see also Clause 3).

The ISSN shall be displayed in a prominent position on or in the first issue and on or in each subsequent issue of serials; or on or in each iteration of ongoing integrating resources.

If a resource bears an ISSN as well as another standard number, such as an ISBN for a volume of a series, the two numbers shall appear together and each number shall be identified by its own prefix: "ISSN" and "ISBN" or another appropriate prefix.

When a single continuing resource bears more than one ISSN in relation to different continuing resource titles, for example the titles of a main series and its subseries, each ISSN shall appear on the continuing resource and each shall be distinguished by either adding the full or abbreviated title in parentheses after the relevant number, or by printing each ISSN as close as possible to the relevant title.

When a continuing resource contains another continuing resource as an insert with a separate title page, the ISSN for the insert shall be printed on its title page, or in some other appropriate place on the insert.

When serials or other continuing resources are produced in different media for which different ISSN and key titles are assigned, the related ISSN may also be displayed on or in the serials or other continuing resources, each with additional, distinguishing information.

EXAMPLES:

ISSN 1562-6865 (Online)

ISSN 1063-7710 (Print)

or

Online version: ISSN 1562-6865

Print version: ISSN 1063-7710

NOTE   For printing and display of ISSN-L, see Annex C.

7.2   Display of ISSN on printed continuing resources

The ISSN shall be printed in a prominent position on each printed issue of a continuing resource in the following order of preference: front cover, title page, caption, masthead, back cover, colophon or editorial pages.

The ISSN shall, whenever possible, appear in the top right-hand corner of the front cover. In the case of *tête-bêche* publications (i.e. when two resources, each with its own ISSN, are bound together in inverted relation to each other), the ISSN pertaining to each resource should be printed in the preferred location (cover, etc., as above) on each resource.

7.3 Display of ISSN on electronic continuing resources and on other non-print media

On a continuing resource published in an electronic medium (e.g. online continuing resource, CD-ROM), the ISSN shall appear on the title screen or, in the absence of a title screen, on the main menu, and, if applicable, on any labels permanently affixed to the publication. If it is not possible to display the ISSN on the item or its label, the ISSN shall be displayed on the container.

For online continuing resources using embedded metadata element sets, the ISSN shall be included in the "Identifier" or equivalent element of such metadata.

On a continuing resource published on microfiche, the ISSN shall be entered in the identification area of the header of the microfiche and/or the labels.

8 Metadata

8.1 ISSN metadata

The ISSN records in the *ISSN Register* contain a common core set of descriptive metadata that is maintained by the ISSN centres (see Annex B).

The list of metadata elements may be augmented with additional elements if needed for national, regional or international purposes.

8.2 Metadata required for ISSN assignment

Metadata is required, in addition to copies of or access to continuing resources, for the assignment of ISSN (see Annex B).

9 Copyright

No copyright shall subsist in the assignment of ISSN or in its use in association with, or in place of, the resources they represent.

10 Fees

ISSN are assigned free of charge.

11 Administration of the ISSN system

The Registration Authority for this International Standard shall be the ISSN International Centre[1]. The ISSN Network shall be supervised, coordinated and administered by the ISSN International Centre.

The principal tasks of the ISSN International Centre and of ISSN national and regional centres are specified in Annex D.

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1) ISSN International Centre, 20, rue Bachaumont, 75002 Paris, France. Telephone: (+33 1) 44 88 22 20.
   Fax: (+33 1) 40 26 32 43. E-mail: issnic@issn.org. Web site: http://www.issn.org.

Annex A
(normative)

Check digit for ISSN

The check digit helps guard against errors resulting from improper data transcription. The check digit is particularly effective in detecting transposition errors. The check digit used in the ISSN is calculated on a Modulus 11 basis using weights 8 to 2, as indicated in Table A.1.

Table A.1 — Procedure for calculating the ISSN check digit

Procedure		Example							
Step 1	Take the first seven digits of the ISSN (the check digit is the eighth and last digit).	0	3	1	7	8	4	7	
Step 2	Associate the following constant weighting factors (8 to 2) to each digit.	8	7	6	5	4	3	2	
Step 3	Apply each constant weighting factor by multiplying each digit by its associated weighting factor (e.g. 0×8; 3×7; 1×6; etc.).		0	3	1	7	8	4	7
		$\times$	8	7	6	5	4	3	2
		$=$	0	21	6	35	32	12	14
Step 4	Sum the products of these multiplications.	0 + 21 + 6 + 35 + 32 + 12 + 14 = 120							
Step 5	Divide this sum by the modulus 11 to find the remainder.	$120 \div 11 = 10$ and a remainder of 10							
Step 6	Subtract the remainder from 11 to generate the required check digit. If the check digit is 10, generate a check digit of X. If there is no remainder, generate a check digit of 0 (zero).	$11 - 10 = 1$ Check digit = 1							
Step 7	Place the check digit at the end of the first seven digits to create the eight-digit International Standard Serial Number (ISSN).	ISSN 0317-8471							

Annex B
(normative)

Metadata

B.1 General

B.1.1 ISSN centres shall supply the *ISSN Register* with metadata about the resource to which the ISSN is assigned. The metadata associated with each ISSN assignment shall be maintained by the ISSN centre.

B.1.2 The specifications concerning the type and format of this metadata shall be established by the ISSN International Centre in cooperation with the individual ISSN centres and shall be published in the *ISSN Manual*.

B.2 Metadata required for ISSN assignment

ISSN assignment and registration are based primarily on the first or earliest issue of serials or on the current iteration of ongoing integrating resources. Copies or surrogates of the resources are required for ISSN assignment in addition to the metadata shown in Table B.1.

Table B.1 —Metadata to be supplied by ISSN requestors

Data element
Title
Country of publication
Medium of publication
Language of publication
Publisher's name and location
Date(s) of publication (year of the first issue and, if applicable, year of the final issue)
Publication status (e.g. currently published, discontinued, unknown)
Frequency

The following elements should be supplied if applicable and available:

Electronic location and access (i.e. URL for online resources)
Additional physical form title or ISSN
Preceding title or ISSN
Succeeding title or ISSN
Supplement parent title or ISSN
Supplement/special issue title or ISSN
Main series title or ISSN
Subseries title or ISSN
Nonspecific relationship title or ISSN
Other edition title or ISSN
Varying form of title

B.3 ISSN metadata

The ISSN metadata, established and maintained by the ISSN International Centre and national or regional ISSN centres, shall include the applicable elements shown in Table B.2. The definition and application of the data elements (mandatory and optional) are described in the *ISSN Manual.*

Table B.2 — Metadata to be established and maintained by ISSN centres

Data element
ISSN
ISSN-L
Key title
Country of publication
Medium of publication
Language of publication
Publisher's name and location
ISSN centre code
Date(s) of publication (year of the first issue and, if applicable, year of the final issue)
Classification
Title proper
Name of issuing body
Electronic location and access
Additional physical form title and ISSN
Preceding title and ISSN
Succeeding title and ISSN
Supplement parent title and ISSN
Supplement/special issue title and ISSN
Main series title and ISSN
Subseries title and ISSN
Nonspecific relationship title and ISSN
Other edition title and ISSN
Original language entry and ISSN
Abbreviated key title
Varying form of title
Publication status (e.g. currently published, discontinued, unknown)
Frequency
Type of continuing resource
Specific material designation
Script of original title
Coden and other codes
Citation/references note

Annex C
(normative)

Linking ISSN (ISSN-L)

C.1 A Linking ISSN shall be designated only by a centre of the ISSN Network.

C.2 The first ISSN assigned, in the *ISSN Register*, to any medium version of a continuing resource shall be designated by default to function also as the linking ISSN and shall apply to all other media versions of that resource identified in the *ISSN Register*.

C.3 The linking ISSN shall be included as a separate data element on each of the metadata records to which it pertains in the *ISSN Register*. Each metadata record in the *ISSN Register* will therefore carry the medium-specific ISSN assigned to the resource described in the record and the designated linking ISSN as separate data elements.

C.4 A linking ISSN shall be designated for each continuing resource identified in the *ISSN Register*, even if the continuing resource exists in only one medium.

C.5 Only one linking ISSN shall be designated regardless of how many different media versions of a continuing resource exist.

C.6 When a continuing resource to which an ISSN has been assigned undergoes a major change and is therefore assigned a new ISSN (major change in title or other major change as defined in the *ISSN Manual),* the relevant linking ISSN shall be designated and recorded in the new metadata record that was created with the new ISSN assignment.

C.7 When printed or otherwise displayed in applications involving collocation of all media versions of a continuing resource, the linking ISSN shall be clearly distinguished as such by use of the label ISSN-L. In such cases, the label ISSN-L shall be written in upper case and a space shall precede the 8 digits of the linking ISSN.

EXAMPLE

ISSN-L 0251-1479

C.8 The linking ISSN can be used as a component in other global identifiers and mechanisms (see examples in Annex E). In such cases, specific syntax requirements may apply for the display of the linking ISSN within the syntax of such other identifiers or mechanisms.

Annex D
(normative)

Roles and responsibilities of the ISSN centres

D.1 General

The Registration Authority for this International Standard shall be the ISSN International Centre[2]).

The ISSN system shall be composed of national and regional ISSN centres coordinated by the ISSN International Centre. The international, national and regional ISSN centres are referred to collectively as the ISSN Network and shall operate in accordance with the specifications outlined in D.2 and D.3.

D.2 ISSN International Centre

The ISSN International Centre shall perform the following functions and services:

a) establish agreements governing the creation and operations of ISSN national and regional centres with the institutions hosting such centres, and revoke such agreements as necessary;

b) allocate blocks of ISSN to national or regional centres;

c) maintain and make available a central register of all ISSN assignments in a timely manner;

d) assign and register ISSN, as necessary, for the serials and other continuing resources published by international organizations or in countries where no national or regional ISSN centre exists;

e) establish and maintain common rules, standards, policies and procedures for the ISSN Network in close cooperation with ISSN national and regional centres;

f) designate and make available, as necessary, the linking ISSN (ISSN-L);

g) coordinate, supervise and promote the policies and operations of the ISSN Network in compliance with the specifications of this International Standard;

h) review and decide on appeals of decisions made by ISSN national and regional centres in such matters as:

   1) rejection of ISSN applications,

   2) disputes concerning the appropriateness of assignments of ISSN to publications;

i) assist national and regional ISSN centres with training and other technical assistance as required;

j) develop, maintain and make available documentation for ISSN national and regional centres and for users of the ISSN system;

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2) ISSN International Centre, 20 rue Bachaumont, 75002 Paris, France. Telephone: (+33 1) 44 88 22 20. Fax: (+33 1) 40 26 32 43. E-mail: issnic@issn.org. Web site: http://www.issn.org. The Statutes of the ISSN International Centre are available on its Web site.

k) develop, maintain and make available promotional material and communication tools for ISSN national and regional centres and for users of the ISSN system;

l) ensure close coordination and cooperation between the ISSN Network and other organizations in related fields, and represent the interests of the ISSN Network to other relevant organizations.

D.3 ISSN national and/or regional centres

ISSN national and regional centres shall perform the following functions and services:

a) undertake sole responsibility for the assignment of ISSN and the associated registration of serials and other continuing resources published in their respective countries;

b) provide ISSN services to publishers and other users upon request and in a timely manner;

c) build and maintain a national register of metadata related to each ISSN assignment within their area of operation;

d) contribute metadata for each assigned ISSN to the central register of the ISSN Network in a timely and accurate manner and in accordance with the specifications of the ISSN International Centre;

e) cooperate with the ISSN International Centre and with other ISSN national and regional centres in the registration of serials and other continuing resources;

f) cooperate with the ISSN International Centre and with other ISSN national and regional centres in the designation of the linking ISSN (ISSN-L);

g) adhere to the policies and procedures established by the ISSN International Centre in compliance with the specifications of this International Standard;

h) carry out their functions in accordance with the operational policies of the ISSN Network in compliance with the specifications of this International Standard;

i) communicate with publishers and other users on all matters relating to ISSN;

j) promote the ISSN system and the use of ISSN;

k) cooperate in the continuing development of the ISSN system and its procedures, formats and standards through active participation in the ISSN Network.

Annex E
(informative)

Use of ISSN and linking ISSN (ISSN-L) with other identification and linking systems

E.1 General

DOI®[3]), OpenURL, URN and EAN bar codes are examples of systems that will use ISSN and linking ISSN (ISSN-L). The information below is provided for the convenience of users of this International Standard to illustrate the interoperability of the ISSN system with these systems. The list of examples given is not exhaustive. ISO does not endorse any of the systems named and this annex does not provide complete or authoritative information on these systems. The relevant governing organizations and documents should be consulted for further information on DOI, OpenURL, URN and EAN bar codes.

New identifier standards and URI schemes, such as the INFO URI, will continue to emerge, and updated information as to the uses of ISSN and ISSN-L in such systems is maintained and made available on the Web site of the ISSN International Centre at http://www.issn.org/.

ISSN and ISSN-L can be incorporated into other identification and linking systems, including, but not limited to, those listed in E.2 to E.6. The use of ISSN in such systems should be for the purpose of identifying or linking to a specific medium version of a continuing resource, e.g. the print version, the online version, the CD-ROM version, as illustrated below. In cases where identifying and linking to a continuing resource is desired without regard to medium (such as in the resolution of OpenURLs where results sets might include links to either online full text or the location of a print copy through a library's catalog), the ISSN-L should be used.

E.2 DOI

E.2.1 Overview

The Digital Object Identifier (DOI) is a system for identifying objects in the digital environment. DOIs are persistent, unique names assigned to any entity for use on digital networks. DOIs are used to provide current information, including where entities (or information about the entities) can be found on the Internet. DOIs are both persistent identifiers and actionable links. The International DOI Foundation makes no recommendations as to the format of a suffix other than that it follows correct syntax. Further information can be found at http://www.doi.org.

E.2.2 DOI and ISSN

E.2.2.1 Syntax and examples

The DOI syntax is defined by NISO Z39.84–2005. Any existing identifier string can be expressed in a form suitable for use within the DOI system. A DOI is composed of a prefix and suffix:

— the DOI prefix is assigned to an organization by a DOI Registration Agency;

— the suffix for a DOI is created by the organization depositing the DOI for a content item in the DOI system.

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3) DOI® is an example of a suitable product available commercially. This information is given for the convenience of users of this International Standard and does not constitute an endorsement by ISO of this product.

Relevant information as to the identity of the referent is included in the metadata associated with the DOI.

An ISSN can be the DOI suffix to identify manifestations of continuing resources (e.g., the print version of a journal). Note also that an ISSN-L can be the DOI suffix to identify a continuing resource irrespective of medium version, see E.2.3.

The ISSN can be incorporated into a DOI in a variety of ways. Thus DOIs may include ISSN in forms such as the following example.

EXAMPLE

    doi: 10.1087/0953151054636219

    Learned publishing = ISSN 0953-1513

To construct a DOI suffix using an ISSN, precede the ISSN (including the hyphen) with the lowercase letters "issn" and a period, as in the hypothetical example shown below of a DOI for the print version of *Nature.*

EXAMPLE:

    doi:10.1038/issn.0028-0836

NOTE   This example illustrates syntax only; *Nature* has not been assigned a DOI at the journal level.

Once a DOI is assigned, the DOI string is considered to be opaque (i.e. no meaning should be read into the number) for the purposes of the DOI System.

E.2.2.2 Usage scenario

Linking from specific manifestations of a journal (print, online, CD-ROM) to information about the manifestation, or related information, can be accomplished using a DOI with embedded ISSN.

EXAMPLE   The John Wiley and Sons journal *Environmental and Molecular Mutagenesis* has been assigned the following DOI using the ISSN for the online version of the journal:

    doi:10.1002/(ISSN)1098-2280

    http://dx.doi.org/10.1002/(ISSN)1098-2280.

The DOI resolves to the journal homepage.

E.2.3 DOI and ISSN-L

E.2.3.1 Syntax and example

An ISSN-L can be the DOI suffix to identify a continuing resource irrespective of medium version.

To construct a DOI suffix using an ISSN-L, begin with the lowercase letters "issnl" and a period, then embed the ISSN-L number (retaining the hyphen).

EXAMPLE   The use of an ISSN-L in a DOI to identify all media versions in the journal *Nature*:

    doi:10.1038/issnl.0028-0836

NOTE   This is a hypothetical example to illustrate syntax only; *Nature* has not been assigned a DOI at the journal level.

Relevant information as to the identity of the referent is included in the metadata associated with the DOI.

E.2.3.2   Usage scenario

For reference linking in systems such as Cross Ref, a DOI using the ISSN-L as the DOI suffix will allow linking to a particular journal irrespective of format. Publishers of continuing resources such as serials can use the ISSN-L as the DOI suffix so that the DOI will resolve to general information about the different media versions that are available.

E.3   OpenURL

E.3.1   Overview

OpenURL is an enabling technology that uses a Web-based request to link metadata for resources to services for that resource. OpenURLs transport identifiers and/or descriptive metadata, along with contextual information, from a metadata source to a link server. When resolving the OpenURL request initiated by a user, the user's link resolver interprets the incoming resource metadata, taking into account the electronic holdings and access privileges of the user's institution. The link resolver then generates Web links to services to which the user has access, including, for example, the online full text of an article. Currently, resource metadata and context information are transported using URLs (the "OpenURL").

The OpenURL framework is defined in ANSI/NISO Z39.88-2004 hereafter referred to as the OpenURL Z39.88-2004 and is available at http://www.niso.org/standards/standard_detail.cfm?std_id=783.

In the NISO OpenURL framework, OpenURLs can be created using approved "community profiles" defined in a registry external to the standard. These profiles support various metadata formats (including books, journals, dissertations and patents).

The NISO Z39.88-2004 OpenURL registry can be found at http://www.openurl.info/registry.

An earlier implementation and de-facto standard of OpenURL (OpenURL 0.1) is, however, still actively being used during the transitional period. Details of OpenURL 0.1 can be found at http://www.openurl.info/registry.

The two versions of OpenURL have significant differences in the way the metadata is encoded and are therefore described separately in E.3.2 and E.3.3, below.

An ISSN-L can be used in an OpenURL to find or link to a continuing resource irrespective of medium version.

It is recommended that the ISSN-L be used in OpenURL linking whenever possible because ISSN-L give link resolvers the maximum flexibility to resolve to whichever medium-specific versions of a continuing resource are in the knowledge base, see E.3.4. Use of ISSN-L can also enable the link resolver to return information about multiple medium-specific versions of a continuing resource if the knowledge base contains such information.

The OpenURL metadata element "issn" as opposed to "issnl" should only be used when medium-specific access or linking is desired.

E.3.2   OpenURL Z39.88-2004 and ISSN

E.3.2.1   Syntax and examples

In OpenURL Z39.88-2004, resource metadata and context information can be transported as either "by value" OpenURLs or "by reference" OpenURLs. The key value pairs in "by value" OpenURLs can be encoded by two methods:

a)   KEV format;

b)   XML format.

ISSN is included in the "journal" metadata formats, which are defined in the OpenURL Registry.

EXAMPLE 1   The KEV journal metadata format (info:ofi/fmt:kev:mtx:journal) in which the ISSN would be encoded as:

http://… &rft.issn=0987-5432&

EXAMPLE 2   The XML journal metadata format (info:ofi/xml:xsd:journal) in which the ISSN could be encoded as an XML element:

<rft:issn>9876-5432</rft:issn>

E.3.3 OpenURL 0.1 and ISSN

E.3.3.1   Syntax and example

The OpenURL 0.1 syntax encodes metadata using a series of key-value pairs separated by an ampersand (&) character. Metadata element names differ, however, from the key-value pairs found in the OpenURL Z39.88-2004 standard in that they are not prefixed by a token that denotes the entity.

EXAMPLE   The encoding of an ISSN in an OpenURL 0.1-formatted URL:

http://resolver?… **issn=9876-5432**…

E.3.3.2   Usage scenario for both OpenURL Z39.88-2004 and OpenURL 0.1

Several library system vendors have developed OpenURL resolver systems which rely on linking, via the ISSN, from citations to full-text or to other services to which an institution may have access. At present, many systems allow only one ISSN to be associated with a title in the knowledge base underlying the system. In this case, use of the ISSN-L is recommended. For knowledge bases where multiple ISSN can be associated to a title, the specific manifestation ISSN can be used.

E.3.4 Open URL Z39.88-2004 and ISSN-L

E.3.4.1   Syntax and examples

It is recommended that the ISSN-L be used in OpenURL Z39.88-2004 whenever possible, because in this framework, OpenURLs can be created using approved "community profiles" defined in a registry external to the standard. These profiles support various metadata formats (including books, journals, dissertations, and patents).

The NISO Z39.88-2004 OpenURL registry is available at http://www.openurl.info/registry.

In order to accommodate the ISSN-L as defined in this standard, new journal format versions would be registered in the OpenURL registry, and new community profiles would be registered that include these new journal format versions. The new KEV and XML journal formats could include a new element respectively:

&issnl = and

<xs:element name="issnl" type="xs:string" minOccurs="0">

These new elements should be used to indicate that what is being encoded is the ISSN-L, as recorded in the designated field of the *ISSN Register*.

EXAMPLE 1   The KEV Format (info:ofi/fmt:kev) represents the resource metadata and context information as a string of key-value pairs and are separated by an ampersand (&) character. In the new KEV journal metadata format (for example, info:ofi/fmt:kev:mtx:journal2005), ISSN-L would be encoded as:

http://… &rft.issnl=0987-5432&

EXAMPLE 2   The XML Format (info:ofi/fmt:xml) represents the resource metadata and context information as an XML document that conforms to a registered XML schema. In the new XML journal metadata format (for example, info:ofi/fmt:xml:xsd:journal2005), ISSN-L could be encoded as an XML element as:

<rft:issnl>9876-5432</rft:issnl>

E.3.4.2   Usage scenario

Library ABC wants to indicate to a link resolver that it should return information about all media versions of a continuing resource in its knowledge base or all versions of a continuing resource that are linked together. Using the ISSN-L in the OpenURL is a way of indicating this to the link resolver rather than using a version-specific ISSN. ISSN-L can also be used to indicate to a link resolver that resolution to any medium-specific version of a continuing resource in the knowledge base is acceptable. Sending a medium-specific ISSN would indicate to the link resolver that only resolution to one medium-specific version of the continuing resource is desired.

E.3.5 OpenURL 0.1 and ISSN-L

Use of ISSN-L with the OpenURL 0.1 standard is not recommended. In this standard, metadata is hard coded in the standard itself and the only encoding format is to encode the parameters as key value pairs in the OpenURL itself. Since the metadata elements in OpenURL 0.1 are not extensible, this version of the standard has no element for the ISSN-L. If use of OpenURL 0.1 is unavoidable, ISSN-L might be used in the private identification area (PID) if all parties to a transaction agree on this usage. Details on OpenURL 0.1 standard are available at http://www.openurl.info/registry.

E.4 URN and ISSN

E.4.1 Overview

The Uniform Resource Name (URN) is a standardized name for a persistent, location-independent, resource identifier. The URN system is an Internet Engineering Task Force (IETF) standard. Further information can be found at http://www.ietf.org/rfc/rfc2141.txt.

E.4.2 Syntax and examples

All URNs include a Namespace Identifier (NID) code and a Namespace Specific String (NSS). The NID indicates the identification system being used for the URN and facilitates the interpretation of the NSS. The NSS is the local code that identifies the individual document (see IETF:RFC 1737 and IETF: RFC 2141). The ISSN is a registered URN Namespace (see IETF:RFC 3044), identified by the NID code ISSN.

EXAMPLES

urn:ISSN:0259-000X

urn:ISSN:1560-1560

E.4.3 Usage scenario

Library ABC wishes to establish a repository for archiving its journal collection. The policy of the repository is to use persistent identifiers expressed as URNs. For each journal in the repository, the library assigns a URN using the ISSN.

E.5 SICI and ISSN

E.5.1 Overview

The Serial and Item Contribution Identifier standard (ANSI/NISO Z39.56-1996 Version 2) provides an extensible mechanism for the unique identification of either an issue of a serial title or a contribution (e.g. article) contained within a serial, regardless of the distribution medium (paper, electronic, microform, etc.).

E.5.2 Syntax and Example

The International Standard Serial Number (ISSN) is used as the unique identification number for a serial publication on which the Serial Item Identifier and the Contribution Identifier are based. All SICIs require an ISSN. The ISSN is used without the letters "ISSN" but retaining the hyphen between the two groups of digits.

EXAMPLE

Item: *De Proverb* v2#1, 1996.
SICI: **1323-4633**(1996)2:1<>1.0.CO;2-8

E.5.3 Usage scenario

SICI, either stored or dynamically-created, can be used by A&I services to supply a document, or can be passed by the service to a third-party supplier. Similarly, SICI can be used in document delivery services. In library reserve room systems, SICI can be used to identify selected readings housed in separate areas. SICI can also be used in automated serials check-in and claiming systems.

E.6 EAN bar codes and ISSN

E.6.1 Overview

An EAN 13 bar code identifies a product to Electronic Point of Sale (EPOS) and other supply chain systems. It is designed to identify a wide range of products, but special provision is made for issues of continuing resources with an assigned ISSN. The bar code system is administered by GS1. Additional information is available on the GS1 Web site at http://www.gs1.org/.

E.6.2 Syntax and example

An EAN 13 bar code symbology encodes 13 numerical digits, made up as follows:

— The first three digits are the GS1 prefix 977 assigned for ISSN-based bar code for an issue of a continuing resource.

— The next seven digits are the ISSN (without the hyphen, and omitting the eighth, check digit) which identify the serial title.

— The eleventh and twelfth digits are variants, and may be used to express additional information assigned by the publisher. Normally this is to indicate a price change.

— The final digit is a check digit calculated according to modulo-10. The check digit appearing in the bar code will likely be different from the ISSN check digit.

It is also possible to use a two- or five-digit add-on to the 13-digit bar code. This allows extra granularity in which to express other information about the product. When used with GS1 prefix 977 assigned for ISSN-based bar codes, the add-on usually indicates the issue number through 2-digits. This is important information for efficient stock management. However, not all EPOS systems can scan the add-on, and separate manual or computerized stock management systems are then employed.
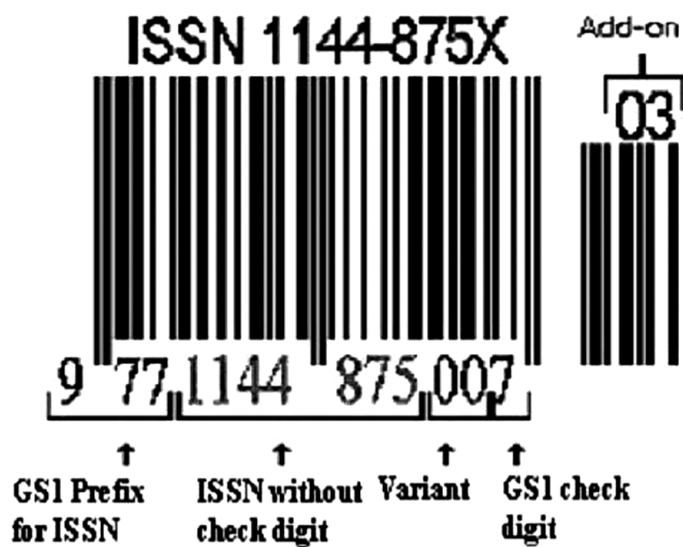
ISSN 1144-875X   Add-on

03

9 77 1144 875 007

↑ | ↑ | ↑ | ↑
GS1 Prefix for ISSN | ISSN without check digit | Variant | GS1 check digit

Figure E.1 — Example of the bar-coded version of an ISSN

E.6.3 Usage scenario

The bar code uniquely identifies a particular issue of a serial to facilitate electronic capture and transfer of data throughout the supply chain by publishers, distributors, wholesalers, retailers, etc. Such data may include price, stock levels and sales figures.

Bibliography

[1]   ISO 4:1997, *Information and documentation — Rules for the abbreviation of title words and titles of publications*

[2]   ISO 9:1995, *Information and documentation — Transliteration of Cyrillic characters into Latin characters — Slavic and non-Slavic languages*

[3]   ISO 233-2:1993, *Information and documentation — Transliteration of Arabic characters into Latin characters — Part 2: Arabic language — Simplified transliteration*

[4]   ISO 259-2:1994, *Information and documentation — Transliteration of Hebrew characters into Latin characters — Part 2: Simplified transliteration*

[5]   ISO 639-2, *Codes for the representation of names of languages — Part 2: Alpha-3 code*

[6]   ISO 843:1997, *Information and documentation — Conversion of Greek characters into Latin characters*

[7]   ISO 2108:2005, *Information and documentation — International standard book number (ISBN)*

[8]   ISO 2709:1996, *Information and documentation — Format for information exchange*

[9]   ISO 3166-1, *Codes for the representation of names of countries and their subdivisions — Part 1: Country codes*

[10]   ISO 3602:1989, *Documentation — Romanization of Japanese (kana script)*

[11]   ISO 7098:1991, *Information and documentation — Romanization of Chinese*

[12]   ISO/TR 21449:2004, *Content Delivery and Rights Management: Functional requirements for identifiers and descriptors for use in the music, film, video, sound recording, and publishing industries*

[13]   *ISSN Manual*. ISSN International Centre, Paris

[14]   *GS1 General Specifications, Identification of Serial Publications, GS1 Prefix 977*. Overview available from: <http://www.gs1.org>

[15]   *International standard bibliographic description for serials and other continuing resources (ISBD(CR)).* International Federation of Library Associations and Institutions (IFLA). München:Saur, 2002

[16]   ANSI/NISO Z39.56-1996 (R2002), *Serial Item and Contribution Identifier (SICI).* Bethesda, MD: NISO Press, 2002. ISBN 1-880124-28-9. Available at <http://www.niso.org/standards/index.html>

[17]   ROZENFELD, S. *Using The ISSN (International Serial Standard Number) as URN (Uniform Resource Names) within an ISSN-URN Namespace* [online]. Request for Comments 3044. Internet Engineering Task Force, January 2001 [cited 4 January 2005]. Available at <http://www.ietf.org/rfc/rfc3044.txt>

[18]   *ONIX for serials* [online]. EDItEUR and NISO, [cited 4 January 2005]. Available at: <http://www.editeur.org/onixserials.html>

[19]   *DOI® handbook* [online]. Version 4.1. International DOI Foundation, November 2004 [cited 21 December 2004]. Available at <http://www.doi.org/hb.html>

[20]   ANSI/NISO Z39.88-2004, *The OpenURL Framework for Context-Sensitive Services.* Bethesda, MD: NISO Press, 2005. ISBN 1-880124-61-0. Available at <http://www.niso.org/standards/index.html>

[21]   Z39.84–2005, *Syntax for the Digital Object Identifier*, <http://www.niso.org/standards/index.html>

[22]   IETF:RFC 1737, *Functional requirements for Uniform Resource Names*,
         http://www.ietf.org/rfc/rfc1737.txt

[23]   IETF:RFC 2141, *URN Syntax*, http://www.ietf.org/rfc/rfc2141.txt

[24]   IETF:RFC 3044, *URN Namespace*, http://www.faqs.org/rfcs/rfc3044.html

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